IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Chikamatsu							
Serial No.:	Not yet assigned							
Filed:	herewith							
For:	VECTOR-DETECTING APPARATUS AND IMPEDANCE MEASURING APPARATUS							
Art Unit:	Not yet assigned							
Examiner:	Not yet assigned							
Confirmation No.:	Not yet assigned							
Customer No.:	27,623							
Attorney Docket No.:	40020852-02							
Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-14								
<u>INF</u>	ORMATION DISCLOSURE STATEMENT							
Dear Sir:								
In accordance with	applicant's duty of disclosure under 37 C.F.R. §1.56, please							
find attached hereto form	PTO-1449 listing information which may be material to the							
patentability of this applic	ation, filed concurrently herewith. This Information Disclosure							
Statement is being filed:								
XXX Within three (3) month	Within three (3) months of the filing date of the national application;							
	Within three (3) months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application;							
Before the mailing date	Before the mailing date of a first Office Action on the merits;							
37 C.F.R. §1.113, prov provided that this I.D.S	After the filing date or date of first Office Action, but before the mailing date of a final action under 37 C.F.R. §1.113, provided that this occurs prior to the issuance of a Notice of Allowance and provided that this I.D.S. is accompanied by either a certification as specified in 37 C.F.R. §1.97(e) or the fee set forth in 37 C.F.R. §1.17(p);							

 After the filing date of date of first Office Action, but before the mailing date of a Notice of Allowance under 37 C.F.R. §1.311, provided that this occurs prior to the final action and provided that this I.D.S. is accompanied by either a certification as specified in 37 C.F.R. §1.97(e) or the fee set forth in 37 C.F.R. §1.17(p);
 After the mailing date of a final action under 37 C.F.R. §1.113, provided that this occurs prior to the issuance of a Notice of Allowance and provided that this I.D.S. is accompanied by a certification as specified in 37 C.F.R. §1.97(e) and the fee set forth in 37 C.F.R. §1.17(p); and
 After the mailing date of a Notice of Allowance under 37 C.F.R. §1.311, provided that this occurs prior to or subsequent to the payment of the Issue Fee and provided that this I.D.S. is accompanied by a certification as specified in 37 C.F.R. §1.97(e) and the fee set forth in 37 C.F.R. §1.17(p).
Filng with RCE Under 37 CFR 1.114.

Cited in the attached PTO-1449 are U.S. Patent No. 4,888,701; Japanese Publication Noss. 09-281163, 05-119078 and 50-133423 and Articles entitled, "LOW-IF TOPOLOGIES FOR HIGH PERFORMANCE ANALOG..." Copied of these references are attached.

It should be understood that attention has been called to the references that have been deemed to be pertinent to the claimed present invention. In concluding what was pertinent, the criteria employed was considered most appropriate in light of the invention shown in the present application. However, the Examiner or others may deem some other criteria to be just as appropriate or more appropriate. Therefore, the Examiner is respectfully urged to review the listed references and to make the usual careful independent search for other prior art that may be pertinent.

Respectfully submitted,

March 25, 2004

Paul D. Greeley Reg. No. 31,019

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FORM PTO-1449				Docket Number (Optional) Application Number							
							Not yet assigned				
INFO	RMATION DISCLOS	TION	Applicant								
IN AN APPLICATION				Chikamatsu Filing Date Group Art Unit							
(Use several sheets if necessary)							·				
				herewith Not yet assigned					-		
	T	U	. S. PATEN	T DOCUMENTS					_		
EXAMINER INITIAL	DOCUMENT NUMBER	DATE		CLASS		SUBCLASS	FILING DATE IF APPROPRIATE				
	4,888,701	12/19/89	Wakasugi et al.		364		482				
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		FOF	REIGN PATE	ENT DOCUMENTS							
								Trans	lation		
	DOCUMENT NUMBER	DATE		COUNTRY	CLAS	S	SUBCLASS	YES	NO		
	09-281163	31.10.97	Japan					X			
	05-119078	14.05.93	Japan					X			
	50-133423	10.4.74	Japan						Χ.		
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	UTHER	ל טטטטו	VIEN IS (inclu	ding Author, Title, Date, Pert	inent Pag	es, Et	c.)	<u> </u>			
	Crols, J. et al. "LOW-IF TOPOLOGIES FOR HIGH-PERFORMANCE ANALOG FRONT ENDS OF FULLY										
	INTEGRATED RECEIVERS," IEEE Transactions on Circuits and Systems-II: Analog and Digital Signal										
	Processing, Vol. 45, No. 3, March 1998.										
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EXAMINER				DATE CONSIDERED							
EXAMINER: Initi	ial if citation considered	whether or no	t citation is in con	formance with MPEP §609; I	Draw line	throu	<u></u>				
				rm with next communication							